

REMARKS

Claims 1 to 10 are present in this application. Claims 3 and 4 have been withdrawn. Claims 1 and 2 are independent claims. Claims 7-10 have been added.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Request Withdrawal of Finality of Office Action

The Office Action presents a new ground of rejection that was not necessitated by amendment. In particular, the Office Action presents a new ground of rejection based on a newly cited reference of Kitajima (U.S. Patent 5,808,681).

As stated in M.P.E.P. § 706.07(a), "second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims, or based on information submitted during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p)."

Accordingly, Applicant requests reconsideration and withdrawal of the finality of the Office action pursuant to M.P.E.P. § 706.07(d).

§ 102(b) Rejection – Kawakami

Claims 1 and 5 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Application Publication 2002/0025157 (Kawakami). Applicant respectfully traverses this rejection.

It is noted that the inventor, Kawakami, is also the inventor in the present invention.

In a section "Response to Arguments," the Examiner states that, "Kawakami teaches that the measurement of the color temperature of the subject light source (the type of subject light source) is determined based on the R, G, B signals obtained from the CCD 114."

Applicant agrees that Kawakami teaches determining color temperature based on R, G, B signals obtained from a CCD. This disclosure is identical to the disclosure in the present application, as they both relate to Japanese Patent Application Publication No. 2000-224608. In

particular, subject matter disclosed in paragraphs 0126 and 0127 (as well as paragraph 0132) of Kawakami is also disclosed in the present specification at page 8, line 21, to page 9, line 14.

As disclosed in each of the Kawakami reference and the present application, the “light source type” that is determined is among day light, shade-cloudy, a fluorescent light, and a tungsten lamp and are based on average value of R, G, and B signals. Furthermore, similar to the case in Kawakami, the CPU can determine a white balance correction value suitable for the light source type.

However, unlike Kawakami, the “correction information” of the present invention is set based on a detection result of a color temperature of light actually emitted from the electronic flash device. Instead, Kawakami teaches determining the color temperature of the subject light in order to adjust/change the light-emission amount and color temperature for the electronic flash light. This aspect of Kawakami is described throughout the specification, for example,

“It is an object of the present invention to provide an electronic flash of a camera and an electronic camera that manually or automatically changes a color temperature of an electronic flash light to prevent unnatural colors of a picture.” (Para. 0008)

“Preferably, the adjusting device comprises a color temperature determining device that determines a color temperature of subject light; and a light emission control device that controls a color temperature of the electronic flash light to the color temperature determined by the color temperature determining device.” (Para. 0018)

As indicated by the Examiner’s further arguments, with respect to use of the CCD in an embodiment of the electronic camera (Fig. 14), Kawakami discloses:

“The imaging devices of the camera can be also used as a part of the color temperature determining device.” (Para. 0020)

“The measurement of the color temperature of the subject light (the type of the subject light source) in the automatic shooting mode or when the icon "AUTO" is selected in the manual shooting mode will be explained.” (Para. 0125)

“The electronic flash 146 is different from the electronic flash 10 of the first embodiment in that it does not have the color temperature sensors 24 for determining the color temperature of the subject light source. The color temperature is determined according to the R, G and B signals obtained from the

CCD 114.” (para. 0132). The determination of color temperature according to R, G, B signals is described in paras. 0126, 0127.

“The CPU 138 outputs the light-emission signal in synchronization with the shutter release and serial signals indicating the light emission amount and the color temperature of the electronic flash light to the system controller 52 of the electronic flash 146.” (Para. 0133)

Thus, it can be seen that the CCD 114 can be used to determine the color temperature of the subject light, so that the electronic flash 146 can emit light at an appropriate amount and color temperature.

Applicant submits that although Kawakami teaches adjusting the amount of emitted light and color temperature of the electronic flash 146, Kawakami does not teach or suggest storing correction information that is based on a detection result of a color temperature of light actually emitted from the electronic flash device, as recited in claim 1. Furthermore, Applicant submits that even if Kawakami can be said to teach determining the color temperature in the case that the subject light source is light emitted from the electronic flash device, it still fails to teach detection of color temperature of light actually emitted from the electronic flash device. Thus, Kawakami fails to teach the claimed stored “correction information.”

The stored “correction information” of the present invention is based on a characteristic of the light-emitting diode installed in the digital camera. It is not the subject light source determined each time a picture is to be captured using the electronic flash light. In order to clarify the intended features of the present invention, claim 1 has been amended to define correction information as “is for the light only from said light-emitting diode.”

In addition, Kawakami’s color temperature determined for the subject light source varies with light conditions depending on the environment for image capture. The “correction information” of the present invention is based on a characteristic of the electronic flash device and is preferably stored in a non-volatile memory (e.g., ROM, EEPROM). In other words, the stored correction information remains unchanged. Applicant has amended claim 1 to explicitly recite “non-volatile memory” for storing correction information.

With respect to claim 5, Applicant submits that since Kawakami fails to disclose the claimed storage device which stores correction information, it follows that it also fails to disclose the claimed input device associated with the storage device.

For at least these reasons, Applicant submits that Kawakami fails to anticipate claims 1 and 5. Applicant requests that the rejection be reconsidered and withdrawn.

§ 102(b) Rejection – Kitajima

Claim 1 has been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,808,681 (Kitajima). Applicant respectfully traverses this rejection.

As in the above remarks, the present invention solves a problem in a digital camera that uses an LED as a flash light source and stores correction information for correcting white balance in a storage device. In particular, the digital camera of the present invention provides a solution to inconsistencies in LED flash light sources between camera products. A solution covered by claim 1 is a digital camera comprising “a storage device which stores correction information for correcting white balance of an image obtained by flash shooting using the electronic flash device, the storage device storing the correction information that is set based on a detection result of a color temperature of light actually emitted from the electronic flash device.”

The Office Action alleges that CPU 12 of Kawakami teaches the claimed storage device and is silent with respect to the claimed “light-emitting diode.”

Requirements for Anticipation

Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. Dismissed, 468 U.S. 1228 (1984); W.L. Gore and Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. Denied, 469 U.S. 851 (1984).

At least because the Office Action is silent with respect to and the cited reference fails to disclose the claimed “light emitting diode,” the rejection fails to establish *prima facie* anticipation.

Furthermore, Applicant submits that one of ordinary skill would understand that CPU 12 of Kitajima is not equivalent to a storage device. Applicant submits that, at least because Kitajima fails to disclose an electronic flash device using a light-emitting diode as its flash light source, Kitajima fails to disclose the claimed storage device storing correction information that is set based on a detection result of a color temperature of light actually emitted from the electronic flash device, as recited in claim 1.

Claim 1 has been amended to recite “non-volatile memory” as the storage device for storing the correction information. Applicant submits that Kitajima’s CPU 12 does not constitute a non-volatile memory.

For at least these reasons, Applicant submits that the rejection fails to establish *prima facie* anticipation of claim 1. Applicant requests that the rejection be reconsidered and withdrawn.

§ 103(a) Rejection – Kawakami, Nakayama

Claims 2 and 6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawakami in view of U.S. Patent 6,963,362 (Nakayama). Applicant respectfully traverses this rejection.

The same deficiencies as noted above for claim 1 with respect to Kawakami’s alleged teaching of the claimed storage device apply as well to this rejection of claim 2. Also, claim 2 has been amended to recite “non-volatile memory” as the claimed storage device. Similar to the above with respect to claim 1, Applicant submits that Kawakami’s CPU 138 does not constitute at least a non-volatile memory.

Furthermore, in a section “Response to Arguments,” the Examiner states that “The correction information is stored in correction device (hue correction 317, Fig. 4) and the modification information for correcting the correction information is stored in a source storage device (hue data B 319 or hue data A 318, Fig. 4) (col. 9, lines 11-35).” Applicant submits that

the alleged “correction information” and “modification information” under this interpretation are the same information.

Nakayama discloses the “Reference numeral 317 denotes a hue correcting circuit for controlling a hue correcting process in accordance with hue data.” Memory storing hue data B is a source of hue data when flash is used. (col. 9, lines 20-26).

Thus, hue data used in hue correcting circuit 317 is the same hue data stored in hue data source B 319. Since the hue correcting process is in accordance with hue data B, hue data B is a type of correction information. Nakayama does not teach correction of this correction information, hue data B. Thus, Applicant submits that Nakayama fails to teach at least “a modification information storage device which stores modification information for correcting the correction information.” Instead, Nakayama discloses that “the color balance is simply corrected in accordance with correction data prepared for use with the flash device,” i.e. hue data B. (col. 9, lines 14-16).

For at least these reasons, Applicant submits that the rejection fails to establish *prima facie* obviousness. Applicant requests that the rejection be reconsidered and withdrawn.

New Claims

New claims 7-10 have been added. Claims 7 and 8 are dependent claims that recite that the correction information is set based on a characteristic of the LED. As noted above, the CCD 114 of Kawakami is used to determine color temperature of the subject light in order to control the amount of light emitted from the electronic flash 146. In the present invention, the stored “correction information” is based on a characteristic of the LED.

Claims 9 and 10 covers the further aspect that the correction information can be updated after manufacturing, as disclosed in the specification at page 11, lines 14-32, and at page 12, lines 14-20.

Applicant submits that Kawakami and Nakayama or Kitajima, either alone or in combination, fail to teach at least the features recited in new claims 7-10.

Conclusion

In view of the above remarks, it is believed that claims are allowable.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact **Robert Downs** Reg. No. 48,222 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: April 11, 2008

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